



*Vidua concolor?* Cass.  
*Ardea goliath*, Temm.  
*Nycticorax caledonicus* (Gmel.).  
*Tigrisoma tigrinum* (Gmel.).  
*Numida ptilonorhyncha*, Rüpp.  
*Craspedocephalus atrox*, Gray; and  
*Coluber constrictor?*

From St. Lucia; presented by Lieut. Tyler, R. E.

*Eunectes murinus*, Wagler.

*Python regius*, Bibron.

*Cyclura Collei*, Gray.

From Jamaica; presented by Dr. A. Smith,  
 F.Z.S. &c.

*Iguana tuberculata*, Laur.

A letter was read from Alexander Elphinston, Esq., H.E.I.C. Civil Service, Bombay, dated Dhoolia, Sept. 1849, in which he stated his intention of forwarding to Bombay, at his own expense, a collection of animals of which he desired the Society's acceptance. In this interesting letter, which was transmitted by A. N. Shaw, Esq., F.Z.S., Mr. Elphinston communicated several particulars relative to the distribution of species in Candeish and Goojerat, and having stated his opinion "that England has a right to expect from her sons in the colonies contributions to our National Zoological Society in London," expressed his determination of continuing his active support to the Institution during his residence in India.

A letter was read from Capt. the Hon. H. Keppel, R.N., communicated by Rear-Admiral Bowles, V.P., in which he announced that he had shipped a young female Urang-utan, on the 6th of September last, on board a merchant vessel from Singapore.

The Secretary reported also that he was in correspondence with the Hon. C. A. Murray, Mrs. Martin Stevenson, Mr. Duncan, Mr. Grace, and Lieut. Tyler, R.E., in reference to collections which might be expected from Egypt, Valparaiso, Whydah, Mogador, and St. Lucia.

The following papers were read:—

1. DESCRIPTION OF A NEW SPECIES OF TUPAIA DISCOVERED IN CONTINENTAL INDIA BY WALTER ELLIOT, ESQ. BY G. R. WATERHOUSE, PRES. ENT. SOC. ETC.

(Mammalia, Pl. XIII.)

Of the species of Tupaia about to be described, three specimens were forwarded to me by W. Elliot, Esq., who, in a letter which accompanied them, states that they were procured from the hills between Cuddapah and Nellox, in what may be termed the Eastern Ghats.

Mr. Elliot, it appears, had abstained from describing and naming this animal from his not having the means of instituting a comparison between it and the known species of the genus. From the comparison which I have made, I am quite satisfied that it is distinct from the three species found in the Indian islands, as well as from the



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TUPAIA ELLIOTI Waterh



animal described by M. Isidore Geoffroy in Bélanger's 'Voyage aux Indes-Orientales\*', which latter was discovered by M. Bélanger at Pegu in the southern part of Birmah. I propose to name the new species after its discoverer, whose researches in Indian zoology merit high praise.

#### TUPAIA ELLIOTI.

The Tupaia of the Eastern Ghats is about equal in size to the *T. Tana*, but differs in the comparatively pale colouring of its fur, in having the tail less bushy, and in the smaller size of its teeth. Its head is shorter than is the head of the animal last mentioned, and consequently considerably shorter than that of the *T. ferruginea*, or of the Tupaia of Pegu, the head of which is said to be 2" 2''' in length, in which respect it agrees very closely with the *T. ferruginea*. The fur is rather less soft than in *T. Tana*, and its general hue on the upper parts of the body is palish rufous brown, very indistinctly freckled with dusky. On the hinder parts of the back the darker penciling is almost entirely wanting, and hence the tint is more uniform; whilst over the shoulders, and especially on the crown of the head, the black or dusky penciling is very evident. The sides and under parts of the body are of a rich yellow tint: on the abdomen the hairs are of an uniform colour—almost of a golden yellow; but on the sides of the body is a moderately distinct penciling of dusky. The chin, throat and chest are of a paler hue than the abdomen, and in parts they are nearly white. The orbits are of the same pale tint, and there is a shoulder-mark (as in other species of the genus) which is nearly white. The feet are clothed above with yellow hairs, and are entirely naked beneath, where they appear to have been flesh-coloured in the living animal. The tail is depressed. The hairs on this organ are of a rich rufous brown tint; but each hair has a narrow dusky ring, if we except those which cover the mesial part of the under surface, which are shorter than the rest, and which are of an uniform ochre-yellow. The specimen from which this description is drawn up is a male, and evidently adult, having all the true molars well-developed, as well as the hindermost of the false molars, which is the last tooth to show itself in these animals. Its dimensions are as follows:—

|   | in. | lin. |
|---|-----|------|
| From tip of nose to root of tail, about . . . . .   | 7   | 9    |
| Length of tail, including the hair, about . . . . . | 9   | 0    |
| —————, not including the hair . . . . .             | 7   | 6    |
| From nose to ear . . . . .                          | 1   | 8†   |
| Height of ear . . . . .                             | 0   | 4    |
| Width of ditto . . . . .                            | 0   | 9    |
| Length of fore-foot and nails . . . . .             | 0   | 11   |
| ———— of nail of middle toe of ditto . . . . .       | 0   | 2    |
| ———— of hind-foot and nails . . . . .               | 1   | 8    |
| ———— of nail of middle toe of ditto . . . . .       | 0   | 2    |

With regard to the remaining two specimens sent by Mr. Elliot, one is a young animal, being about half-grown, and the other is an

\* P. 105, pl. 4.

† In *T. ferruginea* the length from nose to ear is full two inches.

adult female, which differs from the adult male in being of an uniform, and very pale, rufous tint on the upper parts of the body, and of a pale yellow on the under parts. The throat, cheeks and shoulder-mark are yellow-white. I suspect it is an accidental variety. It appears to have but four mammæ, two of which are situated on the lower part of the abdomen, and the remaining two near the insertion of the fore-legs.

The skull of *Tupaia Elliotti* is smaller, considerably shorter, and has a broader muzzle than that of *T. ferruginea*, whilst on the other hand it is longer and larger than that of *T. Javanica*, which is remarkable for the shortness of the facial portion. These differences approximate the skull under consideration to that of *T. Tana*; there are, however, ample differences between the skulls of *T. Elliotti* and *T. Tana*. The skull of the former of these two animals is rather smaller than that of *T. Tana*, has the muzzle relatively shorter, the nasal bones shorter, and broader behind; the zygomatic arch deeper, and the perforation in the malar bone much smaller (less than half the size). In the structure of the teeth, moreover, there are some differences worthy of note. The incisors and premolars in *T. Elliotti* are relatively smaller than in *T. Tana*; but a more important distinction—and one which distinguishes the new *Tupaia* from the other three species noticed—consists in the form of the third premolar: it here resembles the last, or fourth premolar in all respects, excepting in being of smaller size; having like that tooth a distinct inner lobe: this lobe in the other species of *Tupaia* is represented only by a minute and indistinct tubercle. The corresponding lobe in the last premolar in *T. Elliotti* is larger than usual, and so is the posterior inner lobe of the true molars. Subjoined are the principal dimensions of the skulls of the four\* species of *Tupaia*.

|  | <i>T. Tana.</i> |      | <i>T. Tana.</i> |      | <i>T. ferruginea.</i> |      | <i>T. ferruginea.</i> |      | <i>T. Elliotti.</i> |      | <i>T. Javanica.</i> |      |
|--|-----------------|------|-----------------|------|-----------------------|------|-----------------------|------|---------------------|------|---------------------|------|
|  | in.             | lin. | in.             | lin. | in.                   | lin. | in.                   | lin. | in.                 | lin. | in.                 | lin. |
| Total length of skull .....  | 2               | 4    | .....†          |      | 2                     | 0½   | 2                     | 0¾   | .....†              |      | 1                   | 4¾   |
| Length of ditto to the posterior margin of the auditory bulla } .....                | 2               | 0½   | 2               | 1    | 1                     | 9    | 1                     | 10   | 1                   | 7¼   | 1                   | 2½   |
| Width of ditto, measuring from the outer surface of the zygoma .....                 | 1               | 0¾   | .....           |      | 1                     | 0¼   | 1                     | 0½   | 0                   | 10½  | 0                   | 9¾   |
| Width of ditto between orbits ...  | 0               | 7¼   | 0               | 7    | 0                     | 6¾   | 0                     | 7    | 0                   | 6¾   | 0                   | 6½   |
| Length of palate .....   | 1               | 3¾   | 1               | 3¼   | 1                     | 0½   | 1                     | 1¾   | 0                   | 11   | 0                   | 8½   |
| — of nasal bones .....   | 0               | 11½  | 0               | 11   | 0                     | 8½   | 0                     | 9    | 0                   | 7    | 0                   | 4¾   |
| Width of ditto in front .....  | 0               | 1¾   | 0               | 1¾   | 0                     | 1¾   | 0                     | 1¾   | 0                   | 1½   | 0                   | 1½   |
| — of ditto behind.....   | 0               | 2½   | 0               | 2¾   | 0                     | 2½   | 0                     | 2½   | 0                   | 3¼   | 0                   | 1¾   |
| Length from anterior part of first premolar to hinder margin of last true molar..... | 0               | 9½   | 0               | 9¾   | 0                     | 9    | 0                     | 9    | 0                   | 7½   | 0                   | 6    |
| Length of lower jaw .....  | 1               | 6¾   | 1               | 7    | 1                     | 5½   | .....                 |      | 1                   | 3    | 0                   | 10   |
| Height of ditto, measured from apex of coronoid process ... }                        | 0               | 6½   | 0               | 6¼   | 0                     | 6¾   | .....                 |      | 0                   | 6½   | 0                   | 5¼   |

\* I do not include the "*Tupai de Pégou*," because it is not yet determined that that animal is a distinct species from the Tupaia of the Indian Islands.

† The occipital portion of the cranium is wanting in the specimen.

2. ON NEW SPECIES OF MAMMALIA AND BIRDS FROM AUSTRALIA. BY J. GOULD, F.R.S., F.Z.S. ETC.

The Proceedings of the Zoological Society having been the means by which the many interesting novelties in Natural History obtained during the surveying voyages of Captains King, Beechey, Belcher, Fitzroy, Blackwood, &c., by the naturalists attached to their several ships, have been made known to the scientific world, a more appropriate channel cannot, I presume, be selected for communicating the interesting results, so far as known, of the expedition now exploring the coasts of Northern and Eastern Australia, under the command of Capt. Owen Stanley; and I therefore hasten to lay before the Society such novelties as have been received in the two branches of natural history to which I have devoted myself, viz. Mammalia and Birds.

The collection recently sent home by Capt. Stanley and Mr. MacGillivray, the able naturalist of H.M.S. 'Rattlesnake,' is a very fine one; it has been procured on what may be considered hitherto untrodden ground, I cannot therefore do better than give a list of the whole,—such lists, showing the geographical distribution of species, being in the highest degree valuable. I have said that the collection is a very fine one, and I must not omit observing that much credit is due to Capt. Stanley for affording the naturalist the requisite opportunities for obtaining so many interesting species; nor is a lesser meed of praise due to Mr. MacGillivray, for the very excellent manner in which the specimens are prepared, and the accuracy with which all the information connected with them that could be obtained has been noted down. The collection of Quadrupeds and Birds only has been placed in my hands for examination, with a view to my publishing such novelties as it may contain in my works on these subjects; after which the specimens are to be sent to the British Museum. The period that has elapsed since the arrival of the collection has been far too short to admit of my investigating the subject as I could wish; I shall therefore, on the present occasion, exhibit some of the species that appear to me to be new, and defer my remarks upon the entire collection to the next or some future meeting of the Society.

I shall now proceed to describe two species of mammalia and two species of birds from this collection, as follows:—

*PTEROPUS CONSPICILLATUS*, Gould.

*Sp. Ch.*—Crown of the head black, slightly grizzled with buff; round each eye a large oval patch of deep brownish buff, which advances on the sides of the face and shows very conspicuously; at the nape a broad crescent-shaped band of deep sandy buff, which extends down the sides of the neck and nearly meets on the breast; centre of the back glossy black, slightly grizzled with grey; cheeks, chin, all the under surface and rump, black, slightly grizzled with buff; ears and wing-membranes naked and of a deep purplish black; claws black.

*Hab.* Fitzroy Island.

This species is about the size of *Pteropus poliocephalus*, but has a

somewhat larger head and much larger and more powerful teeth, and is moreover rendered conspicuously different from that species by the nuchal band being of a deep sandy buff instead of deep rust-red, and not continuous round the neck; by the crown of the head and back being almost jet-black; and the eyes being conspicuously encircled with deep buff (whence the specific name); in which latter character it assimilates to *P. funereus*, but scarcely to any other. Respecting this species Mr. Macgillivray writes: "Is this not new to Australia? It is not *funereus*, of which see skull No. 7 and skin No. 8, nor is it *poliocephalus*. Of its habits I extract the following note from my journal: 'On the wooded slope of a hill on Fitzroy Island I one day fell in with this bat in prodigious numbers, looking while flying along the bright sunshine (so unusual for a nocturnal animal) like a large flock of rooks: on close approach a strong musky odour became apparent, and a loud incessant chattering was heard; many of the branches were bending under their load of bats, some in a state of inactivity suspended by their hind claws, others scrambling along among the boughs and taking to wing when disturbed. In a very short time I procured as many specimens as I wished, three and four at a shot, for they hung in clusters, but unless killed outright they remained suspended for some time: when wounded they are handled with difficulty, as they bite severely, and on such occasions their cry reminds one of the squalling of a child.'"

**PHALANGISTA (PSEUDOCHEIRUS) NUDICAUDATA, Gould.**

*Sp. Ch.*—Head, all the upper surface, the sides of the body, and the outer sides of the limbs, brownish grey; the tips of the hairs with a silky appearance; under surface of the neck and body and the inner sides of the limbs pale buff; the colouring of the upper and under surface distinctly defined on the sides of the body, but gradually blending on the limbs, the rump and root of the tail, which is thickly clothed on its basal third and naked for the remainder of its length; hands, feet, and naked portion of the tail pinky flesh-colour.

|   | inches. |
|---|---------|
| Length from tip of nose to root of tail . . . . . | 12      |
| —— of tail . . . . .                              | 8       |
| —— of fore-feet, including the nails . . . . .    | 3       |
| —— of hind-feet, including the nails . . . . .    | 3½      |

*Hab.* Cape York, the most northern point of Australia.

This species differs from all the other Australian members of the genus, in having the apical three-fourths of its tail entirely destitute of hair; in the light-coloured mark on the rump, somewhat resembling that on the same part of the Koala; and in its short dense fur and short ears.

The above description and admeasurements are taken from a female said to be about two-thirds grown. The ears are exceedingly short and rounded, and the fur is remarkable for its extreme density and for its resemblance to that of the Koala.







## PTILORIS VICTORIÆ, Gould. (Aves, Pl. XII.)

*Sp. Ch.*—Male: general plumage rich deep velvety black, glossed on the upper surface, sides of the neck, chin and breast with plum-colour; feathers of the head and throat small, scale-like, and of a shining, metallic bronzy green; feathers of the abdomen very much developed, of the same hue as the upper surface, but each feather so broadly margined with rich deep olive-green, that the colouring of the basal portion of the feather is hidden, and the olive-green forms a broad abdominal band, which is sharply defined above, but irregular below; two centre tail-feathers rich shining metallic green, the remainder deep black; bill and feet black.

Female: all the upper surface greyish brown, tinged with olive; head and sides of the neck dark brown, striated with greyish brown; over each eye a superciliary stripe of buff; wing-feathers edged with ferruginous; chin and throat pale buff; remainder of the under surface, under wing-coverts, and the base of the inner webs of the quills rich deep reddish buff, each feather with an irregular spot of brown near the tip, dilated on the flanks into the form of irregular bars; bill and feet black.

Total length,  $10\frac{1}{2}$  inches; bill,  $1\frac{3}{4}$ ; wing, 5; tail,  $3\frac{1}{4}$ ; tarsi,  $1\frac{1}{4}$ .

*Hab.* Barnard's Isles.

*Remark.*—This new species must be placed in the first rank of the many beautiful birds inhabiting Australia; indeed there are few from any part of the world that can vie with it in the richness of its colouring; and I cannot possibly have a better opportunity than now presents itself of paying a just tribute of respect to our most gracious Queen, by bestowing upon this lovely denizen of the Australian forests the specific appellation of *Victoriæ*;—I say of the Australian forests, for although the specimen from which my description is taken is from the Barnard Isles, within the Barrier Reef and only a few miles from the north-eastern shore of Australia, I have evidence, in the notes of the late Mr. Gilbert, that it inhabits the mainland, since he states therein that the Rifle-bird inhabits the northern as well as the southern part of Australia; in which he was in error; the bird he saw in the northern part of the country being doubtless the one here described.

It is very nearly allied to the *Ptiloris paradiseus*, but is a smaller bird, with a still more gorgeous colouring. It may be distinguished from that species by the purple of the breast presenting the appearance of a broad pectoral band, bounded above by the scale-like feathers of the throat, and below by the abdominal band of deep oil-green, and also by the broad and lengthened flank-feathers, which show very conspicuously.

## SPHECOTHERES FLAVIVENTRIS, Gould.

*Sp. Ch.*—Male: crown of the head and cheeks glossy black; orbits, and a narrow space leading to the nostrils naked, and of a light buffy yellow, or flesh-colour; all the upper surface, wing-coverts, outer webs of the secondaries, and a patch on either side of the chest, olive-green; chin, chest, abdomen and flanks beautiful yellow; vent and under

tail-coverts white; primaries and inner webs of secondaries black, edged with grey; tail black, the external web and the apical half of the internal web of the outer feather on each side white; the apical half of the second feather on each side white; the next, or third, on each side with a large spot of white at the tip; bill black; feet flesh-colour.

Female: striated on the head with brown and whitish; all the upper surface olive-brown; all the wing-feathers narrowly edged with greenish grey; under surface white, with a conspicuous stripe of brown down the centre of each feather; vent and under tail-coverts white, without striæ.

Total length,  $10\frac{1}{2}$  inches; bill,  $1\frac{1}{8}$ ; wing,  $5\frac{3}{4}$ ; tail,  $4\frac{1}{4}$ ; tarsi,  $\frac{7}{8}$ .

*Hab.* Cape York.

*Remark.*—Of the same size as *Sphecotheses Australis*, but may be distinguished from that and every other species of the genus by the beautiful jonquil-yellow of its under surface.

### 3. DESCRIPTIONS OF THREE NEW SPECIES OF INDIAN BIRDS.

BY J. GOULD, F.R.S. ETC. ETC.

#### 1. RUTICILLA GRANDIS, Gould.

*Sp. Ch.*—Crown of the head and the basal portion of the primaries and secondaries white; forehead, cheeks, chin, throat, back, wing-coverts, and the apical portion of the primaries and secondaries black; abdomen, lower part of the back, upper and under tail-coverts and tail rich rufous; bill and feet black.

Total length, 7 inches; bill,  $\frac{3}{4}$ ; wing,  $4\frac{1}{8}$ ; tail,  $3\frac{1}{4}$ ; tarsi,  $1\frac{1}{8}$ .

*Hab.* Afghanistaun and Thibet.

*Remark.*—This, the largest and one of the best-marked species of the genus, is nearly allied to the *aurorea* of Pallas.

#### 2. YUNX INDICA, Gould.

*Sp. Ch.*—Upper surface pale brown, finely freckled with grey, and blotched, particularly down the back of the neck, on the centre of the back, and on the wing-coverts, with brownish black; primaries brown, crossed on their outer webs with regular bands of deep buff, and toothed on their inner webs with the same hue; remainder of the wing-feathers like the upper surface, but crossed by broad, irregular bands of brown; tail like the upper surface, but crossed by narrow, irregular bands of brownish black; sides of the throat and neck crossed by numerous narrow bars of blackish brown, the cheeks the same, but somewhat paler; on the centre of the throat a spatulate mark of chestnut-red; centre of the abdomen and under tail-coverts pale buffy white, with a fine stripe of brownish black down the centre of each feather; flanks crossed by irregular bars of brownish black; bill pale horn-colour, deeper at the tip; legs apparently yellowish flesh-colour.

Total length,  $7\frac{3}{4}$  inches; bill,  $\frac{7}{8}$ ; wing,  $3\frac{5}{8}$ ; tail,  $3\frac{1}{4}$ ; tarsi,  $\frac{7}{8}$ .

*Hab.* Afghanistaun and Thibet.

*Remark.*—Nearly allied to the *Y. pectoralis* of Southern Africa,

but differs from that species in being of a larger size, in the lighter hue of the centre of the abdomen, in the striæ down the centres of the abdominal feathers being less strongly defined, and in the under tail-coverts being buff instead of rufous.

### 3. SITTA LEUCOPSIS, Gould.

*Sp. Ch.*—Crown of the head and back of neck jet-black; all the upper surface deep blue-grey; primaries black, edged with grey; centre tail-feathers blue-grey; lateral feathers black, tipped with blue-grey; the two outer ones on each side with a small spot of white on the inner web near the tip; face, chin, throat, breast, and centre of the abdomen white, the latter slightly washed with buff; flanks and under tail-coverts bright chestnut; bill black, with a blue-grey base; legs grey.

Total length, 5 inches; bill,  $\frac{7}{8}$ ; wing,  $3\frac{1}{8}$ ; tail, 2; tarsi,  $\frac{3}{4}$ .

*Hab.* The Himalaya Mountains.

*Remark.*—This is doubtless the species described by Mr. Blyth in his observations on the SITTINGÆ as nearly allied to the *S. cesia*, without however assigning to it a specific name, an omission which I have now ventured to supply.

### 4. ON THE SPECIES OF ANOMIADÆ. BY J. E. GRAY, ESQ., F.R.S. ETC. ETC.

The European species of *Anomiadæ* have been much multiplied, while on the other hand the exotic species have been almost entirely neglected.

The form, substance, surface and colour of the shell, which have been used to distinguish the species, were suspected by Montague to be dependent on the age of the specimens and the locality in which they happened to be found, and further researches have proved the accuracy of these observations.

There being in the British Museum considerable series of specimens of this family from different localities, I have attentively examined them, and believe that I have observed some characters by which they may be distinguished from each other, which are but little, if at all, modified by external circumstances or age.

Mr. Cuming has kindly allowed me to examine the original specimens of *Placunanomia*, described by Mr. Broderip, with some additional specimens which he has since received, and thus enabled me to identify the exotic species which have been described by that naturalist; and also the collection of *Anomiæ* contained in his cabinet, which has furnished me with several additional species.

The species may be divided into two very distinct genera:—

1. ANOMIA. Upper valve with three subcentral muscular scars; the anterior upper lobe of the notch separated from the cardinal edge; the plug entirely shelly, and quite free from the edge of the notch.

2. PLACUNANOMIA. Upper valve with two subcentral muscular scars; the anterior upper lobe of the notch agglutinated to the cardinal edge; plug shelly at the top and near the body to which it is attached, and with horny longitudinal laminae below and internally.

No. CXCVII.—PROCEEDINGS OF THE ZOOLOGICAL SOCIETY.

## I. ANOMIA.

Upper valves with three subcentral muscular scars; byssal notch distinct; the upper part of the anterior lobe of the notch separate from and often partially overlapping the front of the cardinal edge; the plug thick, elongate, entirely shelly, and quite free from the edge of the notch.

*Syn.* Anomia, Müller, 1776; Retzius, 1788; Lamk. 1801; Megerle, 1811; Schum. 1817.

Anomia, pars, Linn. S. N.

Anomia, A. Schumach. Essai, 1817.

Echion and Echinoderma, sp. Poli, Mol. Sicil.

Fenestrella, Bolten, 1798.

Lampades, pars, Gevers, 1787.

"Ænigma, Koch," according to the cabinet of Mr. Cuming.

I am by no means certain that all the species here indicated are distinct, or are to be distinguished by the characters here assigned to them, unassisted by the country which they inhabit; but they seem distinct, and it appears to be desirable that they should be distinguished until we have the means of more completely investigating them, and of examining and comparing the animals which form them.

\* *The upper scar in dorsal valve large; two lower scars smaller, and nearly under the upper one. Shell suborbicular. ANOMIA.*

† *European.*

## 1. ANOMIA EPHIPIUM.

Shell white, yellow, rosy or red-brown; upper valve radiated; internally pearly. The upper scar large, oblong, the two others rather smaller, subequal, one above the other; the lowest of the two rather more behind. Plug large, broad, short; the sinus in lower valve large.

Anomia Ehippium, Linn. S. N. 1150; Chemn. viii. 82. t. 76. f. 692, 693; Mont. T. B. 155; Lamk. Syst. 138; Dillw. R. S. i. 286; Poli, Test. ii. 186. t. 20. f. 9, 10; Lamk. Hist. vi. 226, ed. 2. vii. 273. n. 1.

Anomia Tunica Cepa, Dacosta, B. Conch. 165. t. 11. f. 3.

Anomia cepa, Linn. S. N. 1151; Chemn. viii. 85. t. 76. f. 694, 695; Dillw. R. S. i. 287; Poli, Test. ii. 182. t. 30. f. 1-8; Lamk. H. v. 227, ed. 2. vii. 274. n. 3.

Anomia violacea, Brug. Enc. Meth. 71.

Anomia plicata, Brocch. Conch. 665. t. 16. f. 9.

Anomia scabrella, Philippi, Sicil. i. 92. ii. 65. t. 18. f. 1.

Anomia polymorpha, Philippi, Sicil. i. 92. ii. 65.

Anomia costata, Brocchi, 463. t. 10. f. 9.

Anomia sulcata, Poli, Test. Sicil. t. 30. f. 12; Brocch. t. 10. f. 2.

Anomia radiata, Brocchi, t. 10. f. 10.

Anomia pectiniformis, Poli, Sicil. t. 30. f. 13, on a Pecten; Philippi, Sicil. ii. 63. t. 18. f. 3.

Anomia margaritacea, Poli, Sicil. t. 30. f. 11; Philippi, Sicil. ii. 63.

Anomia electrica, Linn. S. N. 1151; Chemn. Conch. viii. t. 76. f. 691; Lamk. Hist. vi. 227, ed. 2. vii. 274. n. 4.



1 ANOMIA (PATROS) ELYROS  
2 \_\_\_\_\_ ACHÆUS.





*Anomia squamula*, *Linn. S. N.* 1151; *Chemn. Conch.* viii. 86. t. 76. f. 696; *Lamk. Hist.* vi. 228, ed. 2. vii. 275. n. 8.

*Anomia punctata*, *Chemn. Conch.* viii. 88. t. 77. f. 698; *Dillw. R. S.* ii. 288.

*Anomia aculeata*, *Müller, Z. D. Prod.* 249; *Chemn.* viii. 92. t. 77. f. 702; *Mont. T. B.* 157. t. 4. f. 5; *Dillw. R. S.* i. 288.

*Anomia scabra*, *Solander MSS.* fide *Dillwyn.*

*Anomia lens*, *Lamarck, Hist.* vi. 228, ed. 2. vii. 276. n. 9.

? *Anomia aspera*, *Philippi, Sicil.* ii. 65. t. 18. f. 4.

*Anomia elegans*, *Philippi, Sicil.* ii. 65. t. 18. f. 2.

*Anomia patelliformis*, *Chemn. C.* viii. 89. t. 77. f. 700; *Dillw. R. S.* i. 290.

*Anomia striatula*, *Bruguère, Enc. Meth.* 74.

? *Anomia bifida*, *Chemn. Conch.* viii. 79. t. 76. f. 689, 690; *Dillw. R. S.* 290.

*Anomia cylindrica*, *Gmelin, S. N.* 3349; *Dillw. R. S.* i. 291.

*Anomia cymbiformis*, *Maton & Racket, Linn. Trans.* viii. 104. t. 3. f. 6; *Mont. Supp.* 64.

*Anomia coronata*, *Bean, Mag. N. Hist.*

*Anomia patellaris*, *Lamk. Hist.* ed. 2. vii. 273. n. 2; *Deles. Re-cueil*, t. 17. f. 3.

*Anomia pyriformis*, *Lamk. Hist.* vi. 227, ed. 2. vii. 275. n. 5; *Deles. Rec.* t. 17. f. 4.

*Anomia fornicata*, *Lamk. Hist.* vi. 228, ed. 2. vii. 275. n. 6 = *Enc. M.* t. 170. f. 45.

? *Anomia membranacea*, *Lamk. Hist.* vi. 228, ed. 2. vii. 275. n. 7 = *Enc. Meth.* t. 170. f. 1-3?

? *Anomia cucullata*, *Bruguère, E. M.* 70.

*Hab.* European Seas.

Coast of Africa; Capt. Edward Owen. B. M.

#### †† Asiatic.

##### 2. ANOMIA AMABÆUS.

Flat, white, smooth; internally pearly, with a very thin disk.

Upper scar moderate; lower scars 2, rather large (nearly as large as the upper one), confluent into a broad oblong scar.

*Hab.* Philippines, Island Buraas (Jackass Island); on stones, sand, ten fathoms.

##### 3. ANOMIA CYTÆUM.

Shell suborbicular, smooth; internally reddish.

Upper muscular scar very large, subcordate; lower 2, suborbicular, smaller, nearly equal-sized; the upper in the notch of the upper one; the lower hinder close to lower hinder edge of the upper one; sinus in lower valve large.

*Hab.* China, River Zangtze Keang; *Fortune.* Mus. Cuming; two specimens.

##### 4. ANOMIA DRYAS.

Suborbicular, flat, white; upper valve internally and radiately lined.

Upper scar large, oblong; lower scars 2, small, circular, nearly confluent, placed side by side nearly on the same line.

*Hab.* Singapore ; on dead shells, ten fathoms, in coarse sand and gravel. Mus. Cuming ; one small specimen.

5. ANOMIA ACHÆUS.

Shell purplish, smooth ; umbo rather acute ; upper valve generally convex ; inside purplish white.

Upper muscular scar large, lower edge slightly arched ; lower scars 2, small, nearly equal-sized ; the hinder rather lower than the other.

*Hab.* Indian Ocean, Kurachee, mouth of the Indus. Brit. Mus. and Mus. Cuming.

Major Baker has kindly sent to the Museum a very large series of the dorsal valves of this species, collected at *Kurachee*. They are extremely variable in form, surface, colour and thickness, and they also offer considerable variety in the disposition of the muscular scar. In all the upper scar is largest, but variable in shape from round to broad cordate. In most the two lower scars are close together, but separate, and nearly on the same line. In others the lower scar is rather lower than the middle one, and in a few (four) specimens, which are mostly produced posteriorly, the lower scar is much lower ; that is to say, in some the upper edge is parallel with the lower edge of the middle one. In one specimen the two lower scars are on the same line, and are confluent together, forming a scar about the same size as the upper scar, yet showing that the lower scar is formed by two muscles ; so that this valve cannot be confounded with a *Placunanomia*.

The examination of this series of specimens from the same locality I think shows, that though the comparative size and disposition of the scars may furnish good characters for the distinction of the species, yet they are not to be implicitly relied on.

6. ANOMIA BELESIS. (Mollusca, pl. 4. fig. 3, 4.)

White or red ; the upper part of the centre of the dorsal valve white, externally radiately striated ; apex acute, at some distance from the dorsal edge.

Upper valve with three separate scars, the upper one very large oblong, and rather transverse ; two lower ones very small, nearly equal-sized, and nearly on the same line.

*Hab.* Indian Ocean ? *General Hardwicke*. Brit. Mus.

††† *American*.

7. ANOMIA ACONTES.

Yellowish white, suborbicular, flat, smooth ; disk pearly.

Upper scar moderate, subcircular ; lower scars smaller, distant, circular, subequal, the lower one nearly on a line with the lower edge of the middle one.

*Hab.* Jamaica ; *Gosse*. Mus. Cuming ; one small specimen.

8. ANOMIA FIDENAS.

White, pearly, thin, flat, smooth externally, pearly within, with a thick white disk.

Upper scar large, elongate, arched below; lower scars 2, small, circular, far apart, the lower one considerably below the other.

*Hab.* America, west coast. Panama; on *Pinna* at low water. Mus. Cuming, No. 2; three specimens.

9. *ANOMIA ADAMAS.*

Red, thick, with numerous indistinct radiating ribs, most distinct on the edge of the lamina; internally red, pearly, with a small white disk.

Upper muscular scar oblong, arched below; lower scars subequal, separate, but close together, and nearly on the same line.

*Hab.* Galapagos; Lord Hood's Island, attached to *Avicula margaritifera* at nine fathoms. Mus. Cuming, No. 5; three specimens.

10. *ANOMIA PACILUS.*

Red, with distinct radiating ribs; internally reddish pearly, with a thick white disk.

Upper muscular scar oblong, broad, lower edge arched; lower scars 2, rather smaller, nearly similar in size, rather close together but separate, the hinder one rather lower than the other.

*Hab.* Peru; Tambaz; dredged from five fathoms in soft mud. Mus. Cuming, No. 9.

11. *ANOMIA LARBAS.*

Shell white, smooth, lower valve pale green.

Upper muscular scar large; lower scars 2, nearly as large as, and close to, the upper one, nearly equal, and nearly in a line.

*Hab.* Coast of Peru, Payta. Mus. Cuming.

12. *ANOMIA ALECTUS.*

Irregular, upper valves convex, reddish, internally pearly; lower valve green, internally green.

Upper scar large, oblong; lower scars 2, large, rather smaller than the upper one, close together, but not confluent; the lowest one the largest.

*Hab.* Peru, Bay of Guayaquil; *Hinds*. Mus. Brit., and Mus. Cuming, No. 7.

13. *ANOMIA HAMILLUS.*

Reddish, thin, sinuous. Dorsal valve with a triangular, white, porcellanous disk.

Upper scar large, roundish; lower scars 2, separate, close together, nearly equal-sized, small, and nearly on the same line.

*Hab.* West Columbia, Bay of Cañes. Mus. Cuming, No. 6.

14. *ANOMIA LAMPE.*

Shell yellowish green, radiately costated; internally green.

Upper muscular scar large, squareish; lower two rather smaller, subequal, near together and to the upper scar, and nearly on the same line; sinus in lower valve very large.

*Hab.* California; *Lady Katherine Wigram*, Mus. Brit. Mus. Cuming; three specimens.

## 15. ANOMIA TENUISTRIATA.

Shell very variable in shape, regularly radiately striated; sinus of lower valve very large, ovate.

Dorsal valve with three nearly equal muscular scars very close together; the two lower small, placed close together side by side, just on the lower margin of the upper scar, the hinder one being rather behind the hinder edge of the upper one.

*Ostrea anomialis*, *Lamk. Hist. A. s. V.* vi. 220.

*Anomia Ehippium*, *Defrance, Dict. Sci. Nat.* ii.

*Anomia striatula*, *Desh. Coq. Foss. Paris*, t. 65. f. 7, 11.

*Anomia tenuistriata*, *Desh. Coq. Foss. Paris*, i. 377, in *Lamk. Hist.* vii.

Fossil, Grignon.

The very characteristic scars of the dorsal valve are well shown in M. Deshayes' plate above referred to, but not mentioned in the description.

\*\* *Upper scar of dorsal valves large; two lower scars smaller, far behind the upper one. Shell oblong, transverse. ÆNIGMA, Koch.*

## 16. ANOMIA ÆNIGMATICA.

Shell elongate, transverse, oblong, purple or yellowish, with a purplish disk; apex acute, considerably within the dorsal edge.

The upper scar large, suborbicular, subcentral; lower scars 2, much more posterior, small, equal-sized, and nearly confluent.

*Tellina ænigmatica*, *Chemn. Conch.* xi. t. 199. f. 1949, 1950.

*Anomia rosea*, *Gray, Ann. Philos.* 1825, 5.

*Anomia ænigmatica*, *Alton in Wiegmann Arch.* 1837, *Verz.* 21; *Reeve, Nomen. Conch.*

*Hab.* Indian Ocean.

Var. 1. Elongate, purplish brown, smooth, flat. *Chemn. l. c.* f. 1949, 1950.

*Hab.* Indian Ocean, on the surface of flat wooden piles, &c.

Var. 2. Like former, but more elongated, and the sides folded together.

*Anomia naviformis*, *Jonas; fide Mus. Cuming.*

*Ænigma*, sp. *Koch; fide Mus. Cuming.*

*Hab.* Manilla. *Mus. Cuming.*

Var. 3. Flat, smooth; like *Var.* 1, but yellow, with a dark purple-brown transverse ray.

*Hab.* Philippines. *Mus. Cuming.*

Var. 4. Flat, purple; like *Var.* 1, but often more ovate, and with a few radiating ribs, ending in projections, making the edge sinuous.

*Hab.* Singapore; on piles of wood forming the wharves. Borneo. *Mus. Cuming.*

\*\*\* *Two upper scars small; lower one large. Shell suborbicular; sinus small. PATRO.*

## 17. ANOMIA ELYROS. (Mollusca, pl. 4. fig. 1, 2.)

White, lamellar, closely radiately striated.

The disk of the upper valve with three separate subcircular scars; the two upper scars small, subequal, one under the other; the lower one large, nearly circular, subcentral. Notch in lower valve very small. Plug small, elongate, subcylindrical; the notch small, with reflexed edges.

*Hab.* Port Essington; *Earl of Derby*. Depuch Island; *Capt. Sir Everard Home, Bart.* British Museum.

Var. 1.? Shell very thin. *Mus. Cuming.*

Var. 2. Very thick; disk white, very thick. *Mus. Cuming.*

The small size of the upper scars in this species probably depends on the small size and elongated form of the plug. The other species, which have the upper scar the largest, have at the same time a larger notch and a broader plug.

## II. PLACUNANOMIA.

Upper or dorsal valve with two subcentral muscular scars; the upper scar radiately veined. Byssal notch distinct, converted into a hole by the upper part of the anterior lobe of the notch being soldered to and forming part of the cardinal edge: the plug triangular, gradually enlarging in size; the apex and outer surface next to the body to which it is attached, calcareous, longitudinally striated; the inner surface covered with horny, longitudinal, parallel laminæ, and more or less agglutinated to the edge of the notch.

*Syn.* *Placunanomia*, *Broderip, Proc. Zool. Soc.* 1832, 29; *Müller, Syn.* 176; *Desh. in Lamk. Hist.* vii. 269.

*Anomia*,  $\beta$ , *Schumacher, Essai*, 1817.

*Anomia*, pars, *Blainv. Man. Moll.*; *Montague*; *Forbes & Hanley.*

*Ostrea*, sp. *Da Costa*; *Montague.*

*Placunonomia*, *D'Orb. Anér. Mérid.*

*Placunomia*, *Swains. Malac.* 39, 1840.

*Pododesmus*, *Philippi, Wiegmann Arch.* i. 385, 1837.

Mr. Broderip, who established this genus, does not observe the character furnished by the muscular impressions, or the lobe of the notch: he merely says, "Impressio muscularis in utrâque valvâ subcentralis. In valvâ superiore organi adhesionis impressio superadita." And further, that "the organ of adhesion, which in its bony character (for it is more bone than shell) resembles that of *Anomia*, does not perforate the lower valve directly, but is inserted between the laminæ of the internal surface of the lower valve, above the muscular impression and below the hinge, and passes out into an external, irregular, somewhat longitudinal, superficial fissure or cicatrix, which is narrowest at the hinge margin, and which it entirely fills to a level with the surrounding surface."

This form is produced by the gradual increase of the size of the plug and the simultaneous increase of the size of the shell.

Some have considered the "plug" or "stopper" of *Anomia* to be a third valve, which is evidently a mistake. *Philippi (Moll. Sicil.* i. 92) considers it as the ossification of the tendon of the adductor muscle.

Mr. Broderip, in the passage quoted, regards it as a *bone*. In Dr. Dieffenbach's Travels I have remarked: "The plug is evidently only

a modification of the kind of laminar beard formed by the end of the foot of the *Arcs* (*Arcæ*); for, like it, it is formed of numerous parallel, erect, longitudinal horny laminæ, placed side by side, extending from the apex to the margin, and it is on these plates that the calcareous matter is deposited when the attachment assumes its shelly substance. The same structure is to be observed in the plug of the European *Anomia Ehippium (striata)*."—*Voy. New Zealand*, ii. 261.

Messrs. Forbes and Hanley compare it to the byssus of *Pecten*, and venture to predict that when the very young *Anomiæ* have been observed, they will be found to be attached by threads like that genus (*Brit. Moll.*). I have examined a very small specimen of the genus, and found it laminar, like that of the adult shell.

M. Philippi, when describing *Pododesmus*, appears to have observed only the upper of the two muscular scars, for he gives as the generic character, "*Impressio muscularis unica, ovata*," and he only figures the larger upper one on the plate.

The upper scar, which is usually of a larger size, and has its surface covered with radiating veins, while the lower is generally punctated, appears to be the one which gives rise to the muscle that is attached to the inner surface of the plug.

\* *Shell plicately folded. Perforation of lower valve small, firmly embracing the plug. PLACUNANOMIA.*

1. PLACUNANOMIA CUMINGII.

Shell depressed; edge of the valves with three or four large angular folds.

*Placunanomia Cumingii, Broderip, Proc. Zool. Soc. 1832, 29; Sow. Genera, t. ; Manual, t. . f. .*

*Hab.* Central America; Gulf of Dulce, Province of Costa Rico.

\*\* *Shell ovate, radiately ribbed; edge not plicated. Perforation of lower valve moderate, firmly embracing and inclosing the plug. PODODESMUS.*

† *American.*

BM 2. PLACUNANOMIA RUDIS.

White; disk brown; smooth laminæ.

Upper valve with two rounded separate scars of nearly equal size, the hinder one rather more transverse.

*Placunanomia rudis, Broderip, Proc. Zool. Soc. 1834, 2.*

*Pododesmus decipiens, Philippi, Wiegmann Arch. i. 1837, 387. t. 9. f. 1 (one scar left out).*

*Hab.* East Indies? *Broderip.* Havana; *Philippi.* West Indies; *Brit. Mus.*

So M 3. PLACUNANOMIA FOLIATA.

White, smooth laminæ, with very slight, distant, radiated ribs; disk purple brown.

Upper valve with two nearly united scars; the upper largest, and rather elongated; lower small, rounded.

*Placunanomia foliata*, Broderip, *Proc. Zool. Soc.* 1834, 2.

*P. echinata*, Broderip, *Proc. Zool. Soc.* 1834, 2.

"*P. pectinata*, Brod." in *Mus. Cuming*.

*Hab.* Eastern Columbia, Bay of Guayaquil. Isle of Muerte; Broderip. Martinique, n. 6, and Brazils, n. 7; Mus. Cuming. Jamaica (upper valve of young only); *Rev. L. Guilding*; Brit. Mus.

The specimen of *Placunanomia echinata*, from the island of Nevis, in Mr. Cuming's collection, appears to be only an imperfect specimen of this species. Mr. Broderip doubted if this might not be the case, when he described it.

#### 4. PLACUNANOMIA ABNORMALIS.

White, radiated, ribbed.

Upper valve with two scars, confluent on the lower hinder edge; the upper one rather the largest.

"*Placunanomia abnormalis*, Sow." in *Brit. Mus.*

*Hab.* West Indies.

These three species are very nearly related to each other, and if it were not for the difference in the position of the scars, might be taken for one. The first is white, and the two last have a brown blotch on the internal surface of the dorsal valve.

\*\*\* *Shell ovate, not plicated; radiately ribbed. Perforation of lower valve large, only slightly embracing the large thin plug.*  
MONIA.

#### 5. PLACUNANOMIA MACROCHISMA.

Upper valve with two scars, partly confluent on the lower hinder edge; the upper scar largest. Lower valve with an oval oblique scar, narrowed behind, rather in front of the plug.

*Anomia macrochisma*, Deshayes, *Rev. Soc. Cuvier*. 1839, 359; *Mag. de Zool.* 1841, t. 34.

*Placunanomia Broderipii*, Gray, *B. M.* 1842, and *Mus. Cuming*.

*Hab.* Kamtschatka; Deshayes. "Onalaski," Mus. Cuming. "Cagayan, Lucon," fide "G. B. Sowerby," in Brit. Mus.

M. Deshayes observes: "On sait que dans le plus grand nombre des Anomies la perforation se réduit ordinairement en un simple échancrure, parce que les deux parties du bord supérieur ne se rejoignent jamais. Ici au contraire le trou est complète, et la valve est réellement perforée." This character is common to all the species of *Placunanomia*. M. Deshayes does not figure nor describe the plug. I think the habitat assigned to this species by Mr. G. B. Sowerby must be a mistake. It is the specimen referred to by Mr. Broderip in the observations on the genus in the Proceedings of the Zoological Society.

#### 6. PLACUNANOMIA CEPIO.

Scars 2, far apart; upper very large, ovate, longitudinal, central; BM lower smaller, oblong, oblique, rather behind the upper.

Plug large, flat, broad. Notch large, wide.

*Hab.* California; *Lady Katherine Wigram*; Brit. Mus.

## BM 7. PLACUNANOMIA ALOPE.

Upper valve flat, smooth, radiately striated. Scars two, well separated, rounded, equal-sized.

*Hab.* California; *Lady Katherine Wigram*.

Two upper valves in British Museum.

†† *European*.

## 8. PLACUNANOMIA PATELLIFORMIS.

Shell suborbicular, convex or quite flat, radiately striated; inner disk greenish. Apex rather within the dorsal margin.

The upper muscular scar of the dorsal valve very large, oblong; the lower one small, roundish, on the lower part of the hinder margin of the upper one.

The peduncle of the cartilage with a triangular cavity in front, under the tip, and continued in an oblong rib-like ridge towards the centre of the shell.

*Anomia patelliformis*, *Linn. S. N.* 1152; *Nov. Act. Upsal.* 1773, i. 42. t. 5. f. 6, 7; *Retzius, Nov. Gen. Test.* ii.; *Sars, fide Mus. Cuming*; *Loven, Moll. Scand.* 30; *Forbes & Hanley, Brit. Moll.* 334. t. 56; *Wood, Index Test.* t. 10. f. 10, not *Chemn.*

*Squama Magna, Chemn. Conch.* vii. 87. t. 77. f. 697.

*Anomia Squama, Gmelin, S. N.*; *Schumacher, Essai.*

*Ostreum striatum, Da Costa, Brit. Conch.* 162. t. 11. f. 4.

*Anomia undulatum striata, &c., Chemn. Conch.* viii. 8. t. 77. f. 699.

*Anomia undulata, Gmelin, Syst. Nat.* i. 3346; *Mont. Test. Brit.* 157. t. 4. f. 6; *Maton & Racket, Trans. Linn. Soc.* viii. 103; *Turton, Conch. Dict.* 4. *Bivalves*, 230. t. 18. f. 8, 9; *Dillw. R. S.* i. 289; *Wood, Index Test.* t. 11. f. 9.

*Ostrea striata, Pulteney in Hist. Dorset*, 36; *Donovan, B. Shells*, ii. t. 45; *Mont. T. B.* 153, 580.

*Anomia striata, Loven, Index Moll. Scand.* 29; *Forbes & Hanley, Brit. Moll.* 336. t. 55. f. 1, 6. t. 53. f. 6.

*Hab.* Coast of Europe. British Seas, *Lister*. North Sea, *Sars, fide Mus. Cuming*, n. 51.

This species is easily known from the other European species by being generally thicker and regularly radiately ribbed, and greenish; but the number and position of the muscular scars at once separate it from all the multiform varieties of that species. Some authors, overlooking the latter character, have been inclined to regard it as a mere variety.

I may remark, that the large series of this species which I have examined has shown that the position of the two muscles is liable to a slight variation; in by far the larger number of specimens the small lower muscle is quite close to and confluent with the scar of the upper larger muscle, but in a few specimens it is separated from the upper larger one by a small interval or space. This has induced me to believe that probably the three West Indian species of the genus may prove, when a larger series of specimens have been collected and compared, only varieties of the same species.



††† *Australian.*9. *PLACUNANOMIA ZEALANDICA.*

Suborbicular, white, smooth; upper valve with distant radiating grooves; internally dark green.

Upper valve with two confluent scars; upper oblong, longitudinal, lower rather small and more transverse.

*Anomia Zealandica*, Gray, in *Dieffenbach's New Zealand*, ii. 261, 1843.

*Hab.* New Zealand; on the inside of mussel shells.

10. *PLACUNANOMIA IONE.*

Shell white, laminar; edge of the laminae with small, slender, elongated processes; internally green.

Lower muscular scars small, round, on the lower hinder edge of the larger one; sinus or perforations large.

— *Hab.* Australia, Sydney; on rocks, *Mr. Strange.*

— Mus. Cuming; three specimens. ? Van Diemen's Land.

— *Dr. Sinclair*, Brit. Mus., a single dorsal valve.

11. *PLACUNANOMIA COLON.*

Shell (upper valve) flat, with rather irregular, flat, radiating ribs; white, lower spotted; upper valve with two separate scars; the upper one oblong, longitudinal, the lower much smaller, circular.

*Hab.* —?

Mr. Cuming's Collection (no. 10). Mr. Humphrey's Collection; a single upper valve of a rather young shell.

Here may be added the description of a new genus, intermediate between this family and *Placunidae*.

III. *HEMIPLACUNA.*

Shell free; valves orbicular, flat, external surface minutely laminar and radiately striated, especially on the edge of the plates; muscular scar in each valve single, nearly central, circular; the right valve flat, with a large oblong, elevated transverse process for the cartilage, having a very small concavity in the inner surface in front of the cartilaged process representing the sinus in *Anomia*; the left valve rather more convex, with an oblong transverse pit for the internal cartilage under the umbo.

*Hemiplacuna*, G. B. Sowerby, MSS.

This shell has all the external characters of the flat species of *Placuna*, and has the same muscular impression; but instead of having the two linear diverging ridges and grooves to give attachment to the cardinal cartilage, it has an oblong elevated process in the right valve, and an oblong cavity in the left, exactly similar to those found in the genus *Anomia*; and on the inner surface of the right valve, just in front of the base of the process which supports the cartilages, there is a small shallow roundish pit with a short furrow towards the centre of the shell, which is evidently a rudimentary representation of the sinus found in the genus *Anomia*. This sinus is not visible on the outer surface of the shell.

This shell forms a most excellent passage between the genus *Anomia*, or rather *Placunanomia*, and *Placuna*. It shows the gradual change which takes place between the three genera. In *Anomia* there are two muscles for the purpose of attaching itself to marine bodies, which form a plug which is free from the sinus of the shell.

In *Placunanomia* there is only a single muscle to perform the same office, but in the more typical species of this genus the plug itself is affixed into the surface of the shell, forming, as it were, part of its substance. In *Hemiplacuna* and *Placuna* there is no muscle or plug for attachment, and the shells are free; but in *Hemiplacuna* there is a rudimentary development of the sinus through which the plug is emitted, and the ligament which connects the shell is of the same form as that found in the genera *Anomia* and *Placunanomia*.

Mr. George B. Sowerby kindly showed me this shell, which he purchased with a number of other fossil shells brought from the Red Sea. He informed me that he intends to describe it at length, and give it the name which I have with his permission here used. The specimen now forms part of the British Museum collection. I immediately recognized in it the species of *Placuna* figured by M. Rozière in his plates of the fossils of the Red Sea, engraved in Napoleon's large work on Egypt.

The name for the genus is not consistent with the Linnæan canon; but I use it rather than attempt to form a less objectionable one, and thus burthen the genus with two names.

#### HEMIPLACUNA ROZIERI.

*Placuna*, sp., Rozière, *Description d'Égypte, Minéralogie*, t. 11. f. 6.

*Hemiplacuna* Rozieri, *G. B. Sow. MSS.*

*Anomia?* or *Placuna?* *Desh. in Lamk. Hist.* vii. 270, *note.*

Fossil. Shore of the Red Sea; Vallée de l'Égarement.

#### 5. ON THE HABITAT OF *CYPRÆA UMBILICATA*, SOWERBY. BY RONALD GUNN, ESQ. IN A LETTER TO J. E. GRAY, ESQ.

Mr. Gunn, the enthusiastic and intelligent naturalist in Launceston, Van Diemen's Land, from whom we have received so many productions of that island, has most kindly sent to the British Museum a fine specimen of the above shell, which was described by Mr. Sowerby in the Appendix to the Tankerville Catalogue. Mr. Gunn in his letter observes:—

“Cowries, found upon the east shore of Barren Island, one of Hunter's islands, N.W. of Van Diemen's Land. Considerable numbers of the dead shell of this species were to be seen lying upon a deep bed of the dead shells of a species of *Pectunculus*.”

“I will send you a Cowry which is new: it is most closely allied to *Cypræa eximia* of Strzelecki, ‘Physical Description of New South Wales and Van Diemen's Land;’ at all events it is not figured in Reeve's monograph of the genus. It is larger than *C. eximia*. I am not perfectly clear that it will prove to be the same; if so, it will

corroborate an opinion which I have some time held, that the *C. eximia* was not a fossil, but carried inland by the aborigines, and fell from near the surface to the position in which it was said to be found. *Vide pp. 296, 297.*"

6. ON *CYPRÆA UMBILICATA* AND *C. EXIMIA* OF SOWERBY.  
BY J. E. GRAY, ESQ.

*Cypræa umbilicata* was described from a single specimen which was formerly in the Tankerville Collection and is now in the British Museum. From its external resemblance to some specimens of *Cypræa Pantherina*, some peculiarities in its formation, and especially from certain apparent irregularities in its teeth, it has been thought that it might be a monstrosity or irregular growth of that species.

The discovery of the habitat by Mr. Gunn, who has kindly sent two specimens of the species to Europe, has removed this impression, and shown that it is a distinct species; and that what was regarded as the irregularities in the plaits of the front of the pillar, is in fact the normal form of the species.

Such being the case shows that the species should be removed from the genus *Cypræa*, as restricted in my monograph in the Zoological Journal, and placed in the genus *Cyprovula*, first described in that work.

The shell, instead of having the single large plait in front of the inner lip separated from other plaits by a wide space, has the front of the inner lip covered with several oblique plaits, nearly up to the front edge of the notch.

It also agrees with *Cyprovula* in the spire being concave or sunken, forming a deep umbilicus.

*Cypræa eximia*, figured in Strzelecki's 'New South Wales and Van Diemen's Land,' is a very nearly allied species, and equally a *Cyprovula (eximia)*. It differs in the body being more globular and the canal longer. Both these species are to be distinguished from the other *Cyprovulæ* by the canal at each end of the mouths being more developed and produced: they also both have a somewhat angular depression across the upper part of the anterior canal, at the anterior extremity of the dorsal line, evidently formed by the junction of the two expansions of the mantle in this part.

The elongation of the canals, and the depression above referred to, are more developed in *Cyprovula eximia* than in *Cyprovula umbilicata*. They are, especially the latter, the giants of the genus. The original specimen of *C. eximia* is in the cabinet of Mr. John Morris of Kensington.

To give some idea of the extraordinary price which is now sometimes required for shells, I may state that the second specimen of this Cowry, sent home by Mr. Gunn to a London collector, was offered by him to Miss Saul for £30, and eventually realised that price.

## 7. DESCRIPTION OF A NEW SPECIES OF CYTHEREA.

BY LOVELL REEVE, F.L.S., F.Z.S. ETC.

CYTHEREA NOBILIS. *Cyth. testá orbiculari-cordatá, crassá, transversim concentricè líratá, líris rudibus, obtusis, subplanulatis, numerosis, crebris, valdè irregularibus, hic illic internissis, non parallelis; lacteá, epidermide tenui corneá, translucidá, indutá.*

Long.  $4\frac{1}{4}$  in. ; lat.  $2\frac{1}{2}$  in. ; alt. 4 in.

*Hab.* — ?

This fine species, from the collection of A. L. Gubba, Esq., is distinguished by a peculiarity in the form and arrangement of the concentric ribs with which it is sculptured. They are very numerous, flattened, close-set, and extremely irregular, now narrow, now broad, each one varying irregularly in width and now and then suddenly intermitted. It is of a pure cream-colour, covered with a thin, horny, transparent epidermis. Mr. Gubba obtained it from a vessel in Havre-de-grace, but could not ascertain its locality.

## 8. DESCRIPTIONS OF TWENTY-FOUR NEW SPECIES OF HELICEA, FROM THE COLLECTION OF H. CUMING, ESQ.

BY DR. L. PFEIFFER.

1. STREPTAXIS GLABRA, Pfr. *Str. testá umbilicatá, depressè ovatá, tenui, pellucidá, virescenti-albidá, omnino glabrá; spirá laterali, acutiusculá; suturá albo-marginatá; anfractibus 6 convexiusculis, penultimo inflato, ultimo antrorsum deviante; umbilico angusto, non pervio; aperturá perobliquá, semicirculari, dente minuto parietis aperturalis munitá; peristomate albo, subincrassato, breviter reflexo.*

Diam. maj. 8, min. 6, alt. 5 mill.

*Hab.* Demerara.

2. STREPTAXIS CUMINGIANA, Pfr. *Str. testá perforatá, depresso-globosá, solidulá, glabrá, virenti-albidá; spirá sublaterali, conoidé; anfractibus 7 angustissimis, subplanis, penultimo prominulo, ultimo antrorsum deviante; aperturá perobliquá, auriformi, lamellá intrante parietis aperturalis coarctatá; peristomate simplice, breviter expanso, marginibus callo tenui junctis, dextro arcuato, infernè dente 1 acuto munito, basali stricto, dente 1 transversè elongato instructo, columellari brevissimo, ad perforationem non perviam subreflexo.*

Diam. maj.  $6\frac{2}{3}$ , min.  $5\frac{1}{3}$ , alt. 4 mill.

Locality unknown.

3. HELIX MONSSONI, Pfr. *H. testá perforatá, turbinatá, tenui, levi, carinatá, striis incrementi et lineis confertissimis impressis, obliquè antrorsum descendentibus subtilissimè decussatá, diaphaná, albidá, rubro-unicingulatá; spirá conoidé, apice obtusiusculá; suturá submarginatá; anfractibus 6 subplanulatis, ultimo magno, infra cingulum carinato (cariná anticè ob-*

soletá), basi convexiusculo; aperturá obliquá, subangulato-lunari; peristomate simplice, recto, margine columellari supra perforationem breviter reflexo.

Diam. maj. 38, min. 33, alt. 23 mill.

Locality unknown.

4. *HELIX ALBICANS*, Pfr. *H. testá perforatá, depressá, striatá, sublævigatá, nitidá, hyalino-albidá; spirá vix elevatá; suturá impressá, marginatá; anfractibus 5 planiusculis, lentè accrescentibus, ultimo non descendente, subrotundato, circa perforationem impresso; aperturá verticali, latè lunari; peristomate simplice, acuto, margine columellari brevissimè reflexo.*

Diam. maj. 8, min. 7, alt. 4 mill.

*Hab.* in insulá Jamaica.

5. *HELIX PHLOGOPHORA*, Pfr. *H. testá subperforatá, depressulá, tenuissimá, striatá, pellucidá, nitidá, fulvo-luteá, flammulis angulatis et serrulatis rufis confertis pictá; spirá parum elevatá, apice subpapillatá; anfractibus 3½ convexis, rapidè accrescentibus, ultimo depresso, basi planiusculo; aperturá perobliquá, rotundato-lunari; peristomate simplice, recto, margine columellari subreflexo.*

Diam. maj. 6½, min. 5½, alt. 3 mill.

Locality unknown.

6. *HELIX SERICATULA*, Pfr. *H. testá perforatá, depressá, discoideá, subtiliter et confertim costulatá, striatá, subsericá, griseo-corneá, lineis brunneis irregularibus radiatá; spirá planá; anfractibus 4½ vix convexiusculis, ultimo subrotundato, juxta perforationem subimpresso; aperturá subverticali, latè lunari; peristomate simplice, recto, obtusiusculo, margine basali declivi, supernè reflexo, perforationem ferè occultante.*

Diam. maj. 4½, min. 4, alt. 2½ mill.

*Hab.* ad Port Jackson (Mr. Strange).

7. *HELIX NOBILIS*, Pfr. *H. testá angustè umbilicatá, subturbinato-depressá, solidá; striatá, lineis impressis concentricis et obliquis subtiliter decussatá, fulvá; spirá parum elevatá, subturbinatá; anfractibus 6 parum convexis, ultimo medio circulo elevato, obtuso cincto, infra eum fasciá saturatè castaneá, deorsum dilutá, ornato, circa umbilicum pallido; aperturá amplá, parum obliquá, latè lunari, intus margaritacé; peristomate simplice, recto, margine columellari ad umbilicum in laminam brevem, triangularem reflexo.*

Diam. maj. 53, min. 45, alt. 30 mill.

*Hab.* in insulá Borneo, var. pallida in insulis Philippinis.

8. *HELIX BORNEENSIS*, Pfr. *H. testá obliquè perforatá, depressá, tenuiusculá, striis incrementi distinctis et lineis obliquis, impressis, crebris decussatá, saturatè fulvá; spirá vix elevatá, obtusá; anfractibus 4 parum convexis, celeriter accrescen-*

*tibus, ultimo medio zonâ nigricante, deorsum dilutâ, ornato; suturâ lined impressâ marginatâ; aperturâ obliquâ, amplâ, transversè lunari-ovali, intus margaritaced, fasciâ pellucente; peristomate simplice, acuto, margine columellari in laminam brevem, triangularem, umbilicum semitegentem, reflexo.*

Diam. maj. 52, min. 42, alt. 25 mill.

*Hab.* in insulâ Borneo.

9. *HELIX AFRICANA*, Pfr. *H. testâ perforatâ, depressâ, tenui, nitidâ, minutissimè striatâ, lineis confertis, concentricis, impressis sub lente minutissimè decussatâ, rufo-fuscâ vel pallidè corned; spirâ brevissimè conoidè, apice subelevato; suturâ submarginatâ; anfractibus 7 vix convexiusculis, sensim accrescentibus, ultimo carinato (carinâ anticè obsoletâ), non descendente, basi paulo convexiore; aperturâ depressâ, latâ, lunari; peristomate simplice, recto, acuto, margine columellari supra perforationem brevissimè reflexo.*

Diam. maj. 26, min. 23, alt. 13 mill.

*Hab.* ad Axim in littore occidentali Africae.

10. *HELIX SANDVICENSIS*, Pfr. *H. testâ umbilicatâ, discoideâ, striatâ, nitidâ, luteo-corned; spirâ planâ; suturâ impressâ; anfractibus 5-6 lentè accrescentibus, ultimo depresso, basi vix convexiore; umbilico lato, dimidium ferè diametri occupante; aperturâ parum obliquâ, lunari-rotundatâ; peristomate simplice, recto, tenui, marginibus conniventibus.*

Diam. maj. 18, min. 15, alt. 5 mill.

*Hab.* in insulis Sandwich.

11. *HELIX JACQUINOTI*, Pfr. *H. testâ umbilicatâ, fornicato-conoidè, solidulâ, acutè carinatâ, confertim arcuato-costatâ, albo et fusco variegatâ; spirâ conoidè, obtusâ; anfractibus 8 angustis, omnibus carinatis (carinâ exsertâ, compressâ, costis decurrentibus denticulatâ), ultimo basi vix convexiusculo, radiatim striato; umbilico extus laminâ horizontali coarctato, intus lato; aperturâ depressâ, securiformi, lamellis 6 intrantibus multâ: 2 in pariete aperturali elongatis, 1 columellari et 3 in margine basali profundis, vix conspicuis; peristomate simplice, recto, acuto, margine basali in lamellam umbilici introitum circumclaudentem continuato.*

Diam. maj. 9, min.  $8\frac{1}{2}$ , alt. 5 mill.

*Hab.* in insulâ Tahiti, et in insulis Marquesas.

12. *HELIX COARCTATA*, Pfr. *H. testâ umbilicatâ, depressâ, distanter arcuato-costatâ et sub lente minutissimè spiraliter striatâ, fuscâ, brunneo-tessellatâ; spirâ fornicatâ, supernè depressâ; anfractibus  $8\frac{1}{2}$  angustis, carinatis, ultimo infra penultimum recedente, tertiam paginæ inferæ penultimi partem liberam relinquente, basi vix convexiusculo, obsoletè radiatim costato, distinctius concentricè striato; umbilico lato, extus laminâ horizontali coarctato; aperturâ depressâ, securiformi,*

*lamellis 6 intrantibus munita: 2 in pariete aperturali, 2 in margine basali, 1 in superno, 1 dentiformi in columella; peristomate simplice, recto, acuto, margine basali retrorsum in laminam, umbilicum coarctantem, continuatâ.*

Diam.  $6\frac{1}{3}$ , alt.  $3\frac{1}{2}$  mill.

*Hab.* in insulâ Tahiti.

13. **HELIX NYMPHA**, Pfr. *H. testâ imperforatâ, globoso-depressâ, tenui, obliquè striatâ, nitidâ, diaphanâ, virenti-albidâ; spirâ brevissimâ, apice obtusâ; suturâ albo-flosâ; anfractibus 4 subplanis, rapidè accrescentibus, ultimo subdepresso, basi convexo; columellâ intrante, subverticali, compressâ, albâ; aperturâ obliquâ, latè lunari; peristomate simplice, tenui, castaneo-limbato, margine superno recto, basali breviter reflexo, cum columellâ angulum obtusum formante.*

Diam. maj. 32, min. 26, alt. 18 mill.

*Hab.* in insulis Philippinis.

14. **HELIX TRICOLOR**, Pfr. *H. testâ lenticulari-conoidâ, tenui, carinatâ, undique confertim concentricè striatâ, hyalind, supernè lineis albis et ad suturam fasciâ albâ, castaneo-punctatâ ornatâ; spirâ brevi, conoidâ, apice obtusâ; anfractibus 4 planiusculis, ultimo carinâ albâ, lineis castaneis marginatâ et articulatâ munito, supernè et ad carinam subitè deflexo, basi juxta columellam subgibbo; aperturâ angustâ, perobliquâ, subquadrangulari; peristomate simplice, castaneo-limbato, margine dextro recto, basali breviter reflexo, columellari perdeclivi, introrsum dilatato, excavato, saturatè castaneo.*

Diam. maj. 34, min. 29, alt. 17 mill.

*Hab.* St. Christoval, ins. Salomonis.

15. **HELIX RECEDENS**, Pfr. *H. testâ imperforatâ, subsemiglobosâ, solidâ, carinatâ, supernè confertim costulato-striatâ, pallide carnâ; spirâ fornicatâ; suturâ vix impressâ; anfractibus 6 planiusculis, lentè accrescentibus, ultimo a medio infra penultimum recedente, basi planiusculo, striato; carinâ rufolineatâ; aperturâ obliquâ, angulato-lunari; peristomate sub-simplice, margine dextro recto, basali subincrassato, columellari brevissimè reflexo.*

Diam. 12, alt. 7 mill.

Locality unknown.

16. **HELIX SALLEANA**, Pfr. *H. testâ imperforatâ, conicâ, tenuiusculâ, striatâ et impressionibus obsoletis rugosulâ, parum nitidâ, diaphanâ, cinereo-lutescente, ad peripheriam fasciis 2 fusco-viridibus, punctisque castaneis ornatâ; spirâ conicâ, acutiusculâ; anfractibus 5 convexiusculis, ultimo lineis concentricis impressis notato, subangulato, basi parum convexo; aperturâ parum obliquâ, lunari-ovali, intus nitidâ, concolore, fasciis nigricantibus; peristomate tenui, rectangulè expanso et reflexiusculo, albo, margine columellari supernè dilatato, calloso.*

Diam. maj. 30, min. 24, alt. 24 mill.

*Hab.* in ripis fluvii St. Johan. Guatemalæ (Sallé).

17. *HELIX PLATYSTYLA*, Pfr. *H. testá imperforatá, conicá, solidá, costulato-striatá, albidá, lined rufá ad suturam ornatá; spirá conicá, acutiusculá; anfractibus 6 convexiusculis, sensim accrescentibus, ultimo obsolete angulato, basi subplano; aperturá obliquá, latè lunari; peristomate simplice, marginibus subparallelis, dextro breviter expanso, columellari supernè per dilatato, calloso.*

Diam. maj. 22, min. 19, alt. 19 mill.

*Hab.* in insulis Moluccis?

18. *HELIX BREVIPILA*, Pfr. *H. testá umbilicatá, globoso-depressá, pilis brevissimis, rigidis, quincuncialiter dispositis asperá, haud nitidá, saturatè brunneá; spirá parum elevatá, obtusá; anfractibus vix 5 convexiusculis, ultimo rotundato, anticè subdeflexo, circa umbilicum angustum subcompresso; aperturá obliquá, rotundato-lunari, intus nitidá; peristomate tenui, brunneo-carneo, breviter expanso, marginibus conniventibus, columellari subdilatato-reflexo.*

Diam. maj. 12, min. 10, alt.  $6\frac{1}{2}$  mill.

*Hab.* in orá orientali Novæ Hollandiæ (Mr. Strange).

19. *HELIX BASKERVILLEI*, Pfr. *H. testá umbilicatá, globoso-depressá, solidá, striis incrementi rugulosis, lineisque spiralibus impressis subgranulatá, olivaceo-fuscá, parum nitidá; spirá subconoideo-elevatá, apice obtusiusculá; suturá impressá, crenulatá; anfractibus  $6\frac{1}{2}$  angustis, convexiusculis, ultimo rotundato, anticè vix descendente; aperturá parum obliquá, lunari, dente linguæformi albo parietis aperturalis, obliquè intrante, coarctatá; peristomate validè carneo-labiato, margine dextro arcuato et basali subhorizontali, latè subdentato latè expansis et reflexis, columellari brevi, per dilatato, umbilicum angustum semitegente.*

Diam. maj. 24, min. 19, alt. 14 mill.

*Hab.* Vancouver's Island (Lieut. Baskerville).

20. *HELIX CONNIVENS*, Pfr. *H. testá angustè umbilicatá, depressá, solidá, striis incrementi distinctis, lineisque subtilibus concentricis sub lentè decussatá, corneo-stramineá, nitidulá; spirá parum elevatá; suturá impressá; anfractibus 6 parum convexis, ultimo anticè non descendente, peripheriá subangulato, basi convexiore; aperturá obliquá, latè lunari, intus albidá; peristomate intus valide albo-labiato, marginibus conniventibus, dextro acuto, parum expanso, basali breviter reflexo, columellari supernè dilatato, patente.*

Diam. maj. 26, min. 22, alt. 14 mill.

*Hab.* Liew-Kiew.

21. *HELIX GALACTOSTOMA*, Pfr. *H. testá umbilicatá, convexo-*



orbiculatá, solidá, striatá, sub lentè granulátá, fulvá; spirá brevi, fornicatá, obtusá; anfractibus  $4\frac{1}{2}$  convexiusculis, sensim accrescentibus, penultimo angulato, ultimo subdepresso, anticè deflexo, basi subangulatim in umbilicum, mediocrem, pervium,  $\frac{1}{5}$  diametri vix superantem descendente; aperturá perobliquá, lunari-ovali, intus lacted; peristomate simplice, fusculo-limbato, marginibus conniventibus, callo junctis, dextro brevissimè expanso, basali subreflexo, columellari albo, supra umbilicum dilatato-reflexo.

Diam. maj. 36, min. 31, alt. 18 mill.

Hab. in insulâ Madagascar.

22. HELIX ROSARIUM, Pfr. *H. testá umbilicatá, depressá, tenui, supernè subtilissimè granulátá, diaphand, pallide fulvá, flammis a suturá exeuntibus, cingulisque 3 interruptis, moniliformibus rufis ornatá; spirá pland; anfractibus vix 5 convexis, ultimo subdepresso, anticè non descendente, basi radiatim striatulo et lineis impressis spiralibus distantibus notato, circa umbilicum mediocrem, infundibuliformem subcompresso; aperturá parum obliquá, lunato-subtriangulari; peristomate albo-labiato, breviter reflexo, margine supero ab insertione primum ascendente, tum sinuato, basali strictiusculo, repando, columellari brevi, triangulatim patente.*

Diam. maj. 21, min. 17, alt. 9 mill.

Locality unknown.

23. BULIMUS (PARTULA) DECUSSATULUS, Pfr. *B. testá perforatá, ovato-conicá, tenui, striis incrementi lineisque spiralibus minutissimè decussatulá, vix nitidulá, fulvescenti-albidá, diaphand; spirá brevi, conicá, obtusiusculá; suturá mediocri; anfractibus  $4\frac{1}{2}$  convexis, ultimo  $\frac{5}{9}$  longitudinis æquante, rotundatá; columellá subplicatá, recedente; aperturá angulato-ovali; peristomate simplice, tenui, marginibus conniventibus, dextro campanulatim expanso, columellari super perforationem reflexo.*

Long. 15, diam.  $8\frac{2}{3}$  mill.; ap. 9 mill. longa,  $6\frac{1}{2}$  lata.

Hab. in insulâ Navigatorum.

24. BULIMUS (PARTULA) NAVIGATORIUS, Pfr. *B. testá dextrorsá, perforatá, oblongo-ovatá, solidá, obsolete granulato-striatá, nitidulá, fulvá, lineis confertis saturatoribus signatá; spirá conicá, acutiusculá; suturá levi, albo-marginatá; anfractibus 5 planiusculis, ultimo spiram superante; aperturá oblongá, angustá, intus albida, dente calloso parvulo profundo in ventre anfractús penultimi munitá; peristomate subincrassato, intus valide albo-labiato, marginibus parallelis, dextro breviter expanso, medio subdentato, columellari dilatato, plano, reflexo.*

Long. 23, diam. 11 mill.; ap. (c. perist.) 13 mill. longa, 8 lata.

Hab. in insulâ Navigatorum.

9. DESCRIPTIONS OF TWELVE NEW SPECIES OF VITRINA AND SUCCINEA, FROM THE COLLECTION OF H. CUMING, ESQ.  
BY DR. L. PFEIFFER.

1. VITRINA LUZONICA, Pfr. *V. testá depressá, tenui, lævigatá, nitidá, pellucidá, aureá; spirá planiusculá; suturá simplice, vix impressá; anfractibus 3 sensim accrescentibus, ultimo subdepresso, peripheriá rotundato, basi lato; aperturá obliquá, lunari-ovali; peristomate tenui, margine supero antrorsum subarcuato, columellari tenuissimo, declivi.*

Diam. maj.  $7\frac{1}{2}$ , min.  $5\frac{2}{3}$ , alt. 4 mill.

*Hab.* Sorsogon, iusulæ Luzon (H. Cuming).

2. VITRINA VERREAUXII, Pfr. *V. testá depressá, striatúlá, tenui, diaphand, parum nitente, olivaceo-fulvá; spirá subplanulatá; suturá impressá, marginatá; anfractibus  $3\frac{1}{2}$  rapidè accrescentibus, ultimo depresso, basi angusto, planiusculo; aperturá perobliquá, amplá, lunari-ovali; peristomate simplice, acuto, marginibus approximatis, dextro antrorsum arcuato, columellari breviter recedente, leviter arcuato.*

Diam. maj. 13, min. 10, alt. 6 mill.

*Hab.* in Australiâ (Verreaux).

3. VITRINA STRANGEI, Pfr. *V. testá depressá, tenuissimá, lævigatá, nitidá, fusco-vel virenti-corneá; spirá parvá, vix convexiusculá, vertice subtili, laterali; suturá impressá, submarginatá; anfractibus 3 vix convexiusculis, rapidè accrescentibus, ultimo supernè depresso, peripheriá rotundato, basi convexiore; aperturá obliquá, amplá, lunari-subcirculari; peristomate simplice, obtusulo, marginibus approximatis, dextro antrorsum dilatato, columellari recedente, perarcuato, angustissimè membranaceo-marginato.*

Diam. maj. 10, min.  $7\frac{1}{2}$ , alt. 5 mill.

*Hab.* Brisbane, in orâ orientali Novæ Hollandiæ (Strange).

4. SUCCINEA ACUTA, Pfr. *S. testá oblongá, subfusiformi, tenui, distinctè striatá et minutè malleatá, nitidissimá, pellucidá, roséá, epidermide deciduá fulvá munitá; spirá subelongatá, conicá, acutá; suturá profundá; anfractibus 4 convexis, ultimo  $\frac{3}{5}$  longitudinis vix æquante, basi attenuato; columellá subcallosá, substrictè recedente; aperturá axi ferè parallelá, oblongo-ovali, supernè angulatá; peristomate simplice, tenui, margine dextro leviter arcuato.*

Long. 20, diam.  $9\frac{1}{2}$ , alt. 7 mill.; ap. 12 mill. longa, medio 7 lata.

*Hab.* in Britanniâ, prope Scarborough.

It is impossible to join this beautiful shell to any of the varieties of *S. putris*, from which it differs by its colour, by the elongated and sharply-pointed spire, whorls more convex, nearly straight columella, and oblong-ovate aperture.

5. SUCCINEA SUBGRANOSA, Pfr. *S. testá elliptico-ovatá, tenui,*

*subgranulato-striatâ, diaphanâ, parum nitidâ, pallide corned; spirâ brevi, obtusiusculâ; anfractibus vix 3 convexis, ultimo basi attenuato; columellâ substrictè recedente, supernè leviter callosâ; aperturâ parum obliquâ, subangulato-ovali, intus nitidissimâ; peristomate simplice, acuto, margine dextro mediocriter arcuato.*

Long.  $8\frac{1}{2}$ , diam. 5, alt. ferè 4 mill.; ap. 6 mill. longa, 4 lata.

*Hab.* Kurmant, Indiæ, varietas ventrosior, albida prope Caleutta.

6. *SUCCINEA INDICA*, Pfr. *S. testâ depressè oblongâ, tenuissimâ, longitudinaliter plicatulâ, pellucidâ, pallide corned; spirâ brevi, obtusiusculâ; anfractibus vix 3, penultimo convexiusculo, ultimo  $\frac{2}{3}$  longitudinis æquante; columellâ substrictè ferè ad basin recedente, supernè calloso-marginatâ; aperturâ axi ferè parallelâ, basi recedente, ovali-oblongâ, angulatâ, intus nitidissimâ; peristomate acuto, margine dextro leviter arcuato.*

Long. 17, diam.  $7\frac{1}{2}$ , alt. 6 mill.; ap. 12 mill. longa, infra medium

7 lata.

*Hab.* Bleensal, Indiæ.

7. *SUCCINEA BENSONI*, Pfr. *S. testâ ovato-conicâ, tenui, regulariter confertim striatâ, pellucidâ, sericinâ, luteo-corneâ; spirâ conicâ, acutiusculâ; anfractibus 3, penultimo convexiusculo, ultimo  $\frac{2}{3}$  longitudinis æquante; columellâ callo tenui indutâ, vix arcuatâ, recedente; aperturâ ovali; peristomate tenui, margine dextro mediocriter arcuato.*

Long. 8, diam. 5, alt.  $3\frac{1}{2}$  mill.; ap. 5 mill. longa, 3 lata.

*Hab.* Moradabad, Indiæ (Mr. Benson).

8. *SUCCINEA PICTA*, Pfr. *S. testâ semiovatâ, tenuissimâ, longitudinaliter striatulâ et irregulariter plicatâ, pellucidâ, nitidissimâ, rubenti-fulvâ, roseo-albido strigatâ; spirâ minimâ, papillatâ; suturâ levi; anfractibus  $2\frac{1}{2}$ , ultimo inflato, anticè lineis impressis spiralibus notato; columellâ supernè subcallosâ, recedente, leviter arcuatâ; aperturâ amplâ, parum obliquâ, angulato-ovali, intus rubenti-fulvâ; peristomate simplice, ad insertionem subinflexo.*

Long. 17, diam. 11, alt. 7 mill.; ap. 15 mill. longa, medio 9 lata.

*Hab.* Diana Peak, insulæ St. Helenæ. (On the leaves of cabbage-trees.)

9. *SUCCINEA SALLEANA*, Pfr. *S. testâ depressè ovatâ, tenuissimâ, striatulâ, lineis spiralibus impressis irregulariter notatâ, pellucidâ, nitidâ, corneo-albidâ; spirâ brevissimâ, subpapillatâ; anfractibus  $2\frac{1}{2}$ , penultimo convexo, ultimo  $\frac{3}{4}$  longitudinis superante; columellâ subcallosâ, strictè recedente; aperturâ axi subparallelâ, angulato-ovali; peristomate submarginato, margine dextro vix arcuato.*

Long. 19, diam. 10, alt. 7 mill.; ap. 16 mill. longa, infra medium 9 lata.

*Hab.* New Orleans (Mr. Sallé).

10. *SUCCINEA PUSILLA*, Pfr. *S. testá ovatá, tenui, striatulá, sub lente obsoletè decussatá, diaphaná, parum nitidá, pallide cornéa; spirá brevi, acutiusculá; anfractibus  $2\frac{1}{2}$ , penultimo convexo, ultimo  $\frac{2}{3}$  longitudinis æquante; columellá vix arcuatá, recedente; aperturá obliquá, ovali; peristomate simplice, margine dextro supernè subincurvato, tum strictiusculo.*

Long.  $4\frac{2}{3}$ , diam. 3 mill.; ap.  $3\frac{1}{4}$  mill. longa, 2 lata.

*Hab.* Ceara, in Americâ meridionali.

11. *SUCCINEA RUBICUNDA*, Pfr. *S. testá ovatá, tenui, striatulá, sub lente obsoletè granulosa, diaphaná, parum nitidá, luteo-rubescente; spirá brevi, sanguined, subpapillatá; anfractibus  $2\frac{1}{2}$  convexis, ultimo inflato; columellá callosá, substrictè recedente; aperturá purum obliquá, angulato-ovali, intus nitidissimá; peristomate simplice, margine dextro regulariter arcuato.*

Long. 14, diam. 8, alt. 5 mill.; ap.  $10\frac{1}{2}$  mill. longa, medio 6 lata.

*Hab.* in insulâ Masafuera (Cuming).

12. *SUCCINEA SOLIDULA*, Pfr. *S. testá depressè ovatá, solidulá, longitudinaliter subplicatá, sub lente minutissimè granulatá, vix diaphaná, parum nitidulá, fulvâ; spirá brevi, scalari, apice papillatá, rubicundá; anfractibus  $2\frac{1}{2}$  convexis, ultimo inflato,  $\frac{3}{5}$  longitudinis æquante; columellá substrictè descendente, callosá; aperturá oblongá, intus submargaritaceá; peristomate submarginato, marginibus callo tenui junctis, dextro supernè arcuato, tum strictiore.*

Long. 12, diam. 7, alt.  $5\frac{1}{2}$  mill.; ap.  $8\frac{1}{2}$  mill. longa, 5 lata.

Locality unknown.

The form of this shell is most nearly approaching to *Succinea campestris*.

10. DESCRIPTIONS OF THIRTY NEW SPECIES OF TORNATELLINA, CYLINDRELLA, AND CLAUSILIA, FROM THE COLLECTION OF H. CUMING, ESQ. BY DR. L. PFEIFFER.

1. *TORNATELLINA CUMINGIANA*, Pfr. *T. testá ovato-oblongá, solidá, striatulá, epidermide olivaceo-lutescente indutá; spirá elongato-conicá, apice acutá; anfractibus  $5\frac{1}{2}$  vix convexiusculis, ultimo  $\frac{2}{7}$  longitudinis subæquante; columellá subarcuatá, distinctè et obliquè truncatá; pariete aperturali lamellá magná, horizontaliter intrante munito; aperturá semiovali, intus callosá; peristomate simplice, acuto.*

Long. 8, diam.  $3\frac{2}{3}$  mill.; ap.  $3\frac{2}{3}$  mill. longa, medio  $1\frac{2}{3}$  lata.

*Hab.* in Real Llejos (H. Cuming).

2. *CYLINDRELLA SERICEA*, Pfr. *C. testá profundè rimatá, subcylindraccá, truncatá, solidulá, subtilissimè striatulá, diaphaná, hyalino-albidá, supernè fuscescente; suturá albo-filosá; anfractibus 9 angustis, subæqualibus, vix convexiusculis, ultimo non protracto, basi cariná funiformi munito; aperturá subobliquá,*

*ferè circulari, basi canaliculatá; peristomate albo, expanso, re flexiusculo, supernè affixo.*

Long. 26, diam.  $8\frac{2}{3}$  mill.; ap. c. perist.  $6\frac{1}{2}$  mill. longa, 7 lata.

*Hab.* in insulâ Haiti.

3. *CLAUSILIA CYCLOSTOMA*, Pfr. *Cl. testá non rimatá, fusiformi, gracili, solidá, sub lente subtilissimè et confertissimè undulato-striatá, non nitente, purpurascenti-nigricante; spirá regulariter attenuatá, sursum pallidiorè, apice obtusiusculá, purpureá, nitidá; suturá filari, supernè papilliferá; anfractibus 9 planiusculis, ultimo deorsum soluto, basi bicristato; aperturá circulari, intus nigrá; lamellis approximatis, superá compressá, acutá, inferá minore; lunellá nullá; plicis palatalibus 2-3 profundis, vix conspicuis, subcolumellari immersá; peristomate continuo, supernè submarginato, albo, latè expanso.*

Long. 21, diam. medio 5 mill.; ap.  $4\frac{2}{3}$  mill. longa,  $4\frac{1}{3}$  lata.

*Hab.* in Archipelago Koreano (Sir Edw. Belcher).

4. *CLAUSILIA CLAVIFORMIS*, Pfr. *Cl. testá vix rimatá, subclaviformi, tenui, lævigatá, nitidá, luteo-corneá, albo-variegatá; spirá turritá, apice acutá; anfractibus 9 convexiusculis, ultimo basi rotundato; aperturá elliptico-pyriformi; lamellis tenuibus, inferá profundá, subtransversá; lunellá nullá; plicis palatalibus 2, superá suturæ parallelá, breviusculá, inferá brevissimá, subcolumellari usque ad marginem porrectá; peristomate continuo, vix soluto, tenui, breviter expanso.*

Long. 12, diam.  $3\frac{1}{2}$  mill.; ap. 3 mill. longa,  $2\frac{1}{4}$  lata.

*Hab.* in Archipelago Koreano (Belcher).

5. *CLAUSILIA BELCHERI*, Pfr. *Cl. testá subrimatá, fusiformi-subulatá, solidulá, lævigatá, pellucidá, luteo-corneá, albo-variegatá; spirá gracillimá, apice acutá; anfractibus 13 convexis, ultimo basi tumidulo; aperturá pyriformi; lamellis mediocribus, conniventibus; lunellá nullá; plicis palatalibus 2 suturæ parallelis, superá longiore, alterá brevi, subcolumellari inconspicuá; peristomate continuo, breviter soluto, labiato, breviter reflexo.*

Long. 12-13; diam. 3 mill.; ap. 3 mill. longa,  $2\frac{1}{4}$  lata.

*Hab.* in Archipelago Koreano (Sir Edward Belcher).

6. *CLAUSILIA TURRITA*, Pfr. *Cl. testá subrimatá, fusiformi-turritá, solidá, longitudinaliter subarcuatim striatá, albá, punctis cinereis conspersá, nitidulá; spirá elongatá, gracili, apice cornè, acutá; anfractibus 14 planis, ultimo anticè corrugato, basi subcompresso; aperturá obliquá, pyriformi-ovali, intus fuscá; lamellis parvulis, superá ferè obsoletá, inferá profundá, obliquá; lunellá inconspicuá; plicá palatali 1 superá, subcolumellari immersá; peristomate continuo, soluto, tenui, expanso.*

Long.  $21\frac{1}{2}$ , diam.  $4\frac{1}{2}$  mill.; ap.  $4\frac{1}{3}$  mill. longa,  $3\frac{1}{4}$  lata.

*Hab.* in insulis Candiâ et Siphanto (Spratt).

7. *CLAUSILIA CANDIDA*, Pfr. *Cl. testá rimatá, cylindraco-fusi-*